STRATEGY RESEARCH PROJECT

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DOES THE AIR FORCE HAVE IT RIGHT? ARMY AVIATION SUPPORT FOR SMALL SCALE CONTINGENCIES

BY

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USAWC STRATEGY RESEARCH PROJECT

Does the Air Force have it Right? Army Aviation support for Small Scale Contingencies

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The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

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ABSTRACT

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Downsizing of the active duty military forces and increased commitment of the US in ongoing peacekeeping and contingency operations have brought about a reliance on the ARNG and Army Reserve forces utilizing involuntary Presidential Reserve Call-up(PRC) authority. This paper will focus on the integration of the ARNG and USAR aviation force structure as part of the overall Army Aviation war fight in answering this OPTEMPO requirement. This paper will cover four areas. First it will focus on background information on mobilization and use of reserve components. Second, it will present the vision of the armed services. Third, it will provide an overview of the Army' transformation to the objective force and the Air Force's transition to the Air Expeditionary Forces (AEF). Fourth, it will compare the two services in relation to the integration and utilization of aviation reserve components in meeting the Small Scale Contingency (SSC) deployments. Finally, based on the comparison, a recommendation is made for future policy in developing and integrating Army Aviation force structure as a large base force to support forward deployments.

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DOES THE AIR FORCE HAVE IT RIGHT? ARMY AVIATION SUPPORT FOR SMALL SCALE CONTINGENCIES.

The United States Armed Forces have experienced a thirty-three percent reduction[1] in force structure and personnel in the last ten years. In that same period, the armed services have deployed more than in the previous 40 years. As of April 2002, the United States Army is conducting three steady state Small Scale Contingencies (SSCs); two contingencies in European Command (EUCOM) theater and one in Central Command (CENTCOM) theater. Continued forward presence was the theme of the Quadrennial Defense Review (QDR) published 30 September 2001.[2] Forward presence will most assuredly remain the policy in the wake of the events of 11 September 2001. Active forces in each service depend on the reserve components in meeting mission demands and deployments around the world. In light of these continued deployments and to establish a force able to respond quickly and decisively, the Air Force has transitioned to a concept of Expeditionary Aerospace Force (EAF). This concept fully integrates the Air Force Reserve and Air National Guard with the Active component into rotational support of steady state SSCs with minimum use of the involuntary Presidential Reserve Call-up (PRC) authority. Transforming the Army into the Objective Force is a key element in the Army's vision. Absent is a force management concept and integration of reserve components into rotational forward deployed units to meet SSC deployments. Unlike the Air Force that meets SSC demands with 82 percent voluntary mobilizations, the Army utilizes involuntary mobilizations nearly 100 percent of the time to meet SSC deployments.

I will present four main topic areas in developing my recommendation and conclusion for the integration of Army Aviation force structure to meet current SSC demands. These main topics include: Background, Vision of the Future, Transformation, and Total Force Integration. I will then present my recommendation on how to integrate reserve component Army Aviation and present my conclusion.

BACKGROUND

Total force integration of reserve components with active Army has come a long way since 1973. During the Vietnam War, mobilization of reserves across all services totaled 34,048 personnel. During Desert Shield and Desert Storm over 239,000 reserve forces were activated and deployed. Seventy percent of the Army's combat support; 100 percent of the Navy's Combat Search and Rescue (CSAR) and Logistics Airlift; and 59 percent of the Air Force's tactical fighter wings are examples of deployed reserve component forces. Reserve forces deployed represented 798 units located in over 2000 cities and towns across America.[3]

General Riemer described the great support from the American people during the Gulf War as largely due to the fact we went through a reserve component mobilization process.[4]

Deployments and reliance on the reserve component forces in military operations during the past ten years have continued to increase. SSCs in Bosnia, Kosovo, and Kuwait have experienced more mobilizations of the reserve components than all of the Vietnam conflict. This continued reliance is not a result of better-integrated reserve components. It is a direct result of "national interests" and increased engagement policies of the United States with a simultaneous reduction in the Armed Forces of the United States. A significant difference exists in the concept of mobilizing reserve components between the Army and the Air Force. In the ten years since Desert Storm, the Army has involuntarily mobilized in excess of 19,620 personnel with no recorded voluntary mobilizations. The Air Force, during this same time period, had 6,120 involuntary mobilizations and 26,900 voluntary mobilizations.[5] The remaining portions of this paper will explore these differences.

VISION FOR THE FUTURE

Joint Vision 2020 states the primary purpose of the armed forces has been and will be to fight and win the nation's wars. A transformation goal is the creation of a force that is dominant across the full spectrum of military operations – persuasive in peace, decisive in war, preeminent in any form of conflict. Integration and synchronization of the Total Force is required. Each service is transitioning and transforming to meet the needs and requirements of Joint Vision 2020.[6]

Quadrennial Defense Review Report (QDR) dated 30 September 2001 calls for a capabilities based force that has an overarching theme of:

> Assuring allies and friends of the United States steadiness of purpose and its capability to fulfill its security commitments.
>
> Dissuading adversaries from undertaking programs or operations that could threaten U.S. interests or those of our allies and friends.
>
> Deterring aggression and coercion by deploying forward the capacity to swiftly defeat attacks and impose severe penalties for aggression on an adversary's military capability and supporting infrastructure.
>
> Decisively defeating any adversary if deterrence fails.[7]

A paradigm shift from the old to the new must be made. It calls for forces to adapt to the world that we live in and to the unforeseen future threats. The force-sizing construct shapes forces to:

> Defend the United States.
>
> Deter aggression and coercion forward in critical regions.
>
> Swiftly defeat aggression in overlapping major conflicts.
>
> Conduct a limited number of SSCs.[8]

Under the smaller scale contingency construct, force sizing takes into account the number and nature of tasks assigned. We can no longer continue down a path of adding additional SSCs without looking and accounting for missions already assigned. This method should also account for force requirements driven by forward presence and rotational issues including active and reserve force mix issues. Due to limited end strength in all services of the armed forces, the nation will continue to rely on reserve component forces. The QDR specifically addresses the requirement for Department of Defense (DOD) to explicitly plan to provide a rotational base – a larger base of forces from which to provide forward deployed forces in support of long standing contingency commitments.[9]

Forward presence through a rotational force is utilized and provides a force management tool for the Navy, Marines, and Air Force. During the Class of 2002 Commandant's Lecture Series (CLS) at the Army War College, the speaker presented future characteristics of the services. On his chart he listed each service's one line overarching vision or concept for the future. He depicted the Navy with a concept "Forward ...From the Sea"; The Marine Corps with "Operational Maneuver From the Sea"; The Air Force Concept of "Expeditionary Aerospace Force (EAF)"; and The Army's depiction of the "Interim Brigade Combat Team (IBCT)/Objective Force." A summary of each of the services overarching rotational concepts is presented below.[10]

NAVY- FORWARD ...FROM THE SEA

Navy and Marines follow an expeditionary concept with rotational forward deployed units. The Navy envisions a building block approach of meeting mission requirements across the globe. The Navy maintains a fleet of 12 Carrier Battle Groups (CVBGs). Three CVBGs are deployed at any one time. Remaining forces are in some level of training. An 18 month cycle

includes 6 month deployment, 6 month reconstitution and basic training, and 6 months of intermediate and advance training to include joint operations.[11]

MARINE - OPERATIONAL MANEUVER FROM THE SEA

Marines are also organized into units that provide the geographic combatant commanders with scalable, interoperable, combined-arms Marine Air-Ground Task Forces (MAGTFs). MAGTFS are scalable from smaller Special Purpose (SPMAGTFs) (1- 2K in strength) to accomplish special missions; Marine Expeditionary Units (MEUs) (1.5-3K in strength) for peace and stability operations; Marine Expeditionary Brigades (MEBs) (3-20K in Strength) that respond to Crisis; and Marine Expeditionary Force (MEFs), the largest organization that ranges in strength from 20-90K. Forward deployed rotational concept involves an 18 month cycle similar to the Navy cycle. [12]

AIR FORCE – EXPEDITIONARY AEROSPACE FORCE (EAF)

Air Force completed the transition to the Expeditionary Aerospace Force concept in 2001. It groups all components of conventional Air Force units, minus High Demand/Low Density units into ten Aerospace Expeditionary Force (AEFs). Each AEF incurs an operational 90 day rotation deployment, 10 month recovery training and planning schedule, and 2 month spin up phase. Each cycle lasts 15 months (See table 1). I will go into detail of the EAF concept and AEF construct later in the paper.

Deploy/On Call	Recovery/Training/Exercise Phase	Prep/ Spin-up Phase
90 Days	10 Months	2 Months

TABLE 1 - AEF CYCLE

ARMY – OBJECTIVE FORCE

Army vision statement to support Joint Vision 2020 is " Soldiers on point for the Nation....Persuasive in Peace, Invincible in War." US Army Transformation Campaign Plan refers to the objective force achieving seven characteristics that will define and describe the necessary force. These seven characteristics are deployable, responsive, agile, versatile, lethal, survivable, and sustainable. General Shinseki's white paper on the objective force talks about capabilities and units that will be modular and organizations that will be highly versatile.[13] There is no mention of force management procedures or rotational concepts to support a continued forward presence with an Army that is 33 percent smaller than it was 10 years ago.

Unlike the other services, there is no overarching concept to support a rotationally based forward deployed presence.

TRANSFORMATION – ARMY / AIR FORCE COMPARISON

Both the Army and Air Force are transforming. Both are required to change the way they do business to meet the security challenges of the 21st Century. Both the Army and Air Force Chiefs of Staff announced plans for their services to transform and timelines for implementation of transformation. In this section I will summarize the two services concepts for transformation; focused on integration of reserve components to meet rotational forward deployed demands.

ARMY TRANSFORMATION

Published 10 April 2001, the Army Transformation Campaign Plan (TCP) is the institutional synchronizer and road map for achieving the Army Vision and Joint Vision 2020 and the Objective Force.[14] The Objective Force is the force in which the Army units will transition to in the future. The Army doesn't know what the final Objective Force will consist of, but through technological developments and the use of Interim Brigade Combat Team (IBCT), the Army will transition to it. The first Objective Force units will be fielded in 2005, with the Army completely fielded by 2032.[15] The objective force is defined by responsiveness of a combat capable brigade deploying in 96 Hours, division in 120 hours, and five divisions in 30 days. The Objective Force represents what is possible given future technologies and information advancements. Army Aviation and force management is not addressed in the TCP.[16]

Army Aviation

As of this writing there is no substance to Army Aviation modernization or transformation. There is no message focusing on culture change within the Army to meet the increased deployments with decreased population of soldiers and airframes. In October 1999, the Chief of Staff of the Army, GEN Shinseki, briefed the Army transformation plan. It took many by surprise. It was also surprising to many that it made no mention of Army Aviation.[17] Reviewing the TCP, and the current Army transformation correspondence, integration of Army Aviation is still absent. An Army Aviation modernization plan seemed to come to life in April 2000, but then was "delayed" due to excessive resource requirements both in manpower to field the modernized force structure, and money to fund. On 7 September 2001, General Shinseki made public the "new" Aviation modernization plan that supports Army transformation by posturing the aviation force for transitioning to the Objective Force. The plan calls for a reduction of 400 active duty and 600 reserve component airframes with no future replacements.

It also calls for accelerating retirement of the legacy UH-1 Helicopters and AH-1 Cobras by 2004.[18]

Aviation modernization plan has everything to do with budget constraints and nothing to do with innovation. There is no recreating of force mixes or concepts to support increased operational tempo (OPTEMPO) with decreased airframes. Army Aviation modernization does not meet any "out of the box" innovations required to meet current OPTEMPO deployments. There is no change or innovation in the integration of the total force to accomplish the continued steady state small scale contingencies. We gain recapitalization and modernization upgrades on the thirty plus year old CH-47 and the twenty plus year old UH-60 and AH-64. It includes retirement of the AH-1 and UH-1 helicopters and deactivation of all Army National Guard AH-1 attack battalions and UH-1 light utility helicopter battalions. Army Aviation has decreased from a total of 8,484 helicopters in 1990 to 5,039 helicopters in 2001.[19] By 2004 this number will be reduced by another 1000 airframes.[20] This accounts for a total reduction in Army Aviation assets of 47 percent over the last 12 years. What we have is a reduction of assets without any corresponding change in structure or concept of support to real world deployments. During this same time period, the Air Force has experienced similar reductions in airframes and similar increases in OPTEMPO and deployments. The Air Force's approach to change is significantly different.

AIR FORCE TRANSFORMATION

The Air Force has transitioned from the containment strategy of the Cold War supporting missions from fixed bases in the United States, Europe, and Pacific to an engagement strategy focused on contingency operations. In the last decade, as fixed bases were closed, the Air Force transitioned to forward deployed locations supporting steady state smaller scale contingencies for long periods of times. Examples include Northern and Southern Watch. The operational tempo of units and personnel put into question the ability to support today's missions while simultaneously being prepared to answer tomorrow's unknown requirements. In answering the new changes in missions and increased deployments, the Air Force transitioned to the Expeditionary Aerospace Force (EAF) concept.

Expeditionary Aerospace Force (EAF)

EAF concept is not about a specific unit or mission. It is more a concept that embodies the Air Force vision to organize, train, equip and sustain the Total Force (Active, Air National Guard, and Air Force Reserve) to meet security challenges of the 21st Century.[21] EAF concept embraces and implements the engagement and forward presence functions articulated in the

U.S. Air Force vision "Global Engagement; Strategy for the 21st Century." The EAF is the basis for cultural and structural changes and creates a more effective force management tool. Deployments are increasing, yet the resources are limited. At the foundation of the Air Forces vision is the people. The EAF concept provides a method to provide predictable rotations of forces in the form of AEFs, through total integration of all components. It creates a seamless aerospace power to meet today's steady state requirements while maintaining the flexibility to respond to higher levels of intensity and warfare.[22]

EAF concept links geographically separated Air Force operational wings, groups, and squadrons into 10 notional AEFs. Each has a cross section of Air Force weapon systems to include fighters, bombers, support aircraft, and tactical airlift. An AEF has integrated command and control, trained as a unit to respond rapidly and decisively. The EAF concept better integrates the Total Force (Active, Air Force Reserve, and Air National Guard). The following points were made by Acting Secretary of Air Force, F. Whitten Peters, and Chief of Staff, United States Air Force, General Michael Ryan on 4 August 1998, at the announcement of the restructuring initiative.[23]

> Each AEF would be on call for a 90 day period every 15 months.
>
> Each AEF will train as it will fight, with its active, Reserve, and Air National Guard units, training together using integrated command and control provided by a lead wing.
>
> Each AEF will specifically be tailored to a particular contingency in support of our war fighting CINCs.
>
> The regional CINCs will benefit from the AEF structure, but the men and women of the Total Force will also be big winners under the AEF construct. It allows for more predictability and stability as units will only deploy once every 15 months. A schedule will be published up to two years in advance providing the traditional Guard and Reserve forces and their employers much better notice of deployments and facilitating better use of the Total Force.[24]

An AEF is the force management tool that provides the needed predictability in meeting today's challenges and requirements while simultaneously training and sustaining for essential missions in the future. An AEF cycle defines the procedure in which the forces rotate through scheduled cycles every fifteen months. The cycle includes a deployment / on-call period, preparation spin-up period, recovery, and normal training and exercise period. The deployment period lasts ninety days. This cycle is meant to answer the steady state contingency operations characterized by the last ten years of deployments in places like Operation Southern Watch and Northern Watch. As the operations exceed the steady state, and transition into a possible

Major Theater of War (MTW), the AEF concept may not be feasible to continue. An example of this was the Kosovo campaign in 1998, characterized by the Air Force leadership as approaching a MTW size operation.[25] Units were beginning to transition into the AEF construct when the Kosovo air campaign began. Units that were in the AEF ninety day on-call cycle were deployed, while other AEFs were called up sooner than planned. At the conclusion of the Kosovo air campaign, the AEF concept continued and units fell back into cycle to meet the steady state mission requirements.[26]

SUMMARY OF TRANSFORMATION PLANS

The Army Chief of Staff envisioned the need to change and transform the Army. The Army's TCP is a detailed plan addressing all functional requirements for organizational change. It includes people, leader training and modernization. No overarching force management concept addresses the Army's increased SSC deployments versus the reduced force structure and personnel to meet near term demands. Integration of Army components to meet a forward presence rotational-based force as prescribed in the QDR is absent. There is little discussion of Army Aviation in transformation specific plans. Army transformation extends beyond careers of officers that will join the Army in the next ten years. Time line is indicated in table 2.

October 1999	Initial Phase begins
April 2001	Transformation Campaign Plan Published
CY 2002	Transition – Initial Phase to Interim Phase
April 2003	Science and Technology Decision for FCS
March 2005	1st interim BCT Capable of 96 Hour Deployment
January 2008	Interim Force Fully Fielded
January 2008	Decision to Transition from Interim to Objective Phase
January 2014	Achieve 1 Objective Force Division 120 Hour Deployment
January 2016	Achieve 5 Objective Force Divisions 30 Day Deployment
January 2032	Complete Fielding of Objective Force

TABLE 2 - ARMY TRANSFORMATION TIME LINE[27]

Unlike the Army, the Air Force focused primarily on force management to meet increased demands. Continued mission tasking in the late 1990's global security environment with reduced force structure created a challenge to the Air Force. Focusing on the current mission threatened the ability to reconstitute, train and prepare for the next mission. In wake of these

factors, the Chief of Staff of the Air Force embarked upon the Expeditionary Concept. He briefed a transformation concept that focused on a way the Air Force could change the concept of support, integrate the components, and meet the new mission requirements of the 21st Century. The EAF concept builds on all the core competencies of the organization with modernization of equipment being a critical piece; however, the overriding change is the expeditionary focus and force management. This was all completed very quickly as indicated in Table 3.

4 August 1998	**Air Force Chief of Staff Announces EAF Concept**
CY 1999	**Initiate Transition to EAF – 1st AEF is scheduled**
CY 2001	**Air Force integrated into EAF Concept**

TABLE 3 - EAF IMPLEMENTATION TIME LINE

TOTAL FORCE – INTEGRATION

As seen in the previous section, the transformation plans for the Air Force and the Army is significantly different. The Army takes 31 years to transform to the Objective Force, but still does not address the current or future operational tempo of a smaller organization responsible for more deployments. The Air Force initiated and transitioned to the Expeditionary Aerospace Force concept concentrating on force management techniques in three years. In this portion of the paper I will discuss the integration of reserve component aviation units in answering the call to duty in steady state Small Scale Contingency Operations.

ARMY TOTAL FORCE INTEGRATION

> **"Today I declare that we are The Army, totally integrated, with unity of purpose. No longer the Total Army, no longer the One Army. We are The Army and we will march into the 21st century as The Army."**[28] -General Shinseki

Today nearly 50 percent of Army Aviation is in the reserve components. Mobilization, and deployment of reserve component aviation units to meet small scale contingencies is a reality. Standard deployments are characterized as six months deployed in the theater assigned. The six month deployments do not include train-up, certification, mobilization, and demobilization days. Predictability is improving for visibility of future missions; however, no standard exists for deployment notification timeliness or certification requirements. Each Continental United States Army (CONUSA) has its own method of train-up and certification. Certification for deployments

that are becoming more routine should be standardized. Yet in reality, units deploying to the same regional CINC theater through different CONUSAs, mobilize under different standards. [29]

Since 1990 and the Gulf War, the Army has reduced in size from 1.8 million to 1.2 million Active, Reserve and National Guard. The Active component has reduced in size from 761,100 to 471,700, the Reserves from 588,400 to 278,200 and the Army National Guard from 454,600 to 350,000. This represents a total of 33 percent reduction of the Total Army force. The Army National Guard alone has seen an increased OPTEMPO of performing 500,000 man-day requirements (equivalent to approximately 1 brigade of 1370 personnel on active duty for a year) in 1990 to 4,200,000 man-day requirements (equivalent to approximately 1 division of 11,500 personnel on active duty for a year) in 1999.[30]

The above paragraph may lead the reader to believe that the National Guard is integrated into the Army. With out a question, the Army is dependent on the reserve components to meet mission tasking. But numbers of days utilized does not equate to integration. JP1-02 defines integration as:

> The arrangement of military forces and their actions to create a force that operates by *engaging as a whole*.

The method in which forces within the Army are tasked to support missions does not lend itself to *engaging as a whole*.

No overarching synchronized plan for tasking of units throughout all components of the Army exists. FORSCOM is the force provider of units to meet regional CINC's demands. FORSCOM coordinates mission tasking with Army National Guard Bureau (NGB), but NGB does not fall under tasking authority of FORSCOM. Once mission taskings are accepted by NGB, a completely different certification process for deployment is encountered compared to active duty aviation units. Relevance and dependence on reserve component aviation is not in question. However, reserve component standards for train-up, mobilization and deployment as an integrated partner are not equal to the active duty Army.

Lack of integration and equality in Army Aviation exist in train-up, certification, and deployment lengths into theater of operations. Examples are listed below:

- 180 Day PRC mission requirement into Bosnia versus authorization of 180 Day Continuity Cell (cadre of key personnel), with 100 day PRC rotation of crews into Kuwait. (Rotation funded through NGB-not FORSCOM).[31]

- Certification of individual, crew, and collective tasks by active duty Training Support Battalions (TSB) versus command channel certification of active components.[32]
- Notification for deployment as late as 6 months prior to deployment ("Unofficial" unit roster of future tasking held at NGB and FORSCOM). Six month notification equals 15 training days for reserve components versus 180 training days active units .
- Reserve components prohibited from supporting with normal reserve component two-week annual training period.
- Full time technician support and active guard reserve personnel are resourced at well below authorized and required levels (average fill is 40 percent of authorized).

I have two personal examples and illustrations of the aversion to integrate reserve component forces into the active army. First, during Desert Shield and Desert Storm a challenge existed with Officer Distribution Plan (ODP) for the deployed active duty aviation battalions including the AH-1 Cavalry Squadrons. FORSCOM tasked Active duty units not deployed to fill units from 80 percent strength to 100 percent strength. The 10th Mountain Division Aviation Brigade sent five attack helicopter crew fillers into theater. These crews deployed to theater in mid-January 1991, integrated into the Aviator Training Program (ATP) in assigned units, conducted combat operations during Desert Storm and redeployed back to the 10th Mountain Division within two weeks of the succession of hostilities. No National Guard units were tasked for crews or crew fillers into theater. AH-1 attack battalions at the division and corps level existed in the National Guard; however, there was no integration or utilization of experienced National Guard crews. A decision was made to degrade the active component units rather than integrating the reserve component forces.[33]

Second, in 1989, as a company commander on active duty with the 10th Mountain Division, I was able to certify my attack helicopter company for worldwide deployment. This assessment was based on my knowledge of the company and through external evaluations to include: Aviation Resource Management Survey (ARMS); External Evaluation (EXEVAL); and routine inspections and training. As a Battalion Commander of a National Guard Combat Support Aviation Battalion in June 2000, I could not certify a detachment for deployment to Kuwait. Our unit trained all individual, crew, leader, and collective tasks, while the TSB observed and ultimately certified the unit for deployment. This after a successful deployment to SOUTHCOM, a successful ARMS and Directorate of Evaluation and Standardization (DES) inspection four months prior to deployment.

Standardization exists across all Army Aviation operations except when it comes to unit deployment certification and deployment lengths. Standardization of flight operations is

conducted through the use of Army Regulations, Air Crew Training Manuals, and Training Circulars. Required individual annual and semi-annual requirements are identical for all components of Army Aviation. Every crewmember assigned to Flight Activity Codes 1, 2, or 3 is required to demonstrate annual flight proficiency examinations in the aircraft and mission assigned regardless of component. Every aviation unit within the Army components (Active, National Guard, and Reserve), receive a FORSCOM ARMS evaluation every 18 to 24 months. Standardization of aviation operations across all components is essential for safety and mission accomplishment. So why does it all change in time of notification for deployment and integration into SSCs?

AIR FORCE TOTAL FORCE INTEGRATION

From the origins of the Total Force concept in the early 1970s, the Air Force is the service that provides the best role model for reserve component integration implementation reality.[34] As early as 1970s the Air Force had full confidence in the abilities and use of the Reserve components in actual combat operations.

Funding, training and priority are synonymous to combat readiness. Combat readiness dictates units availability for utilization. From 1994 through 2001, the Air Force reduced the air frame inventory by 610 airframes. The Air National Guard and Air Force Reserve units have maintained a constant 37 percent of the total Air Force missioned aircraft inventory, through the down-sizing of the Air Force.[35] In the 35 year period, between 1953 and 1990, the Air National Guard deployed a total of 11 times. In the 12 year period 1990 through 2001 the number of deployments has exceeded 50.[36]

Today's Air Force depends on the Air Force Reserve and Air National Guard in conducting SSC deployments. Units or crews are routinely scheduled to support the smaller scale contingencies throughout the world. The Air Force applies one standard throughout the force to train and validate crews. The same standards are applied to all units and flight crews, active and reserve. The funding to sustain aviator proficiency throughout the force structure is the same. This provides a seamless method of filling and augmenting units for deployments. The units are inspected, the aviators evaluated, and the commander validates for deployment.

Authorization and funding for full time technicians is at 21 percent of unit strength with active guard reserve (AGR) strength at 10 percent of unit strength. These percentages reflect the Air Force's priority in addressing the OPTEMPO of the reserve components with the challenges of the citizen "airmen." Throughout the Air Force institution an attitude permeates that the mission can't be started, let alone accomplished, without the reserve component team

members. The Air National Guardsmen and Air Force Reserve crews and units are looked at as team members. As an institution, the Air Force recognizes the challenges that await the reservists with dual employer requirements.

After almost three years of planning and integration of the EAF concept into the Air Force, perceptions are that the EAF Concept is working well. Integration of the Air Force Reserve and Air National Guard is instrumental in total mission success. As part of the integration, limitations of the traditional citizen "Airmen" are recognized. The Air Force integrates the reserve components into AEFs using predictable schedules and shorter rotations. This addresses the employer challenges while simultaneously utilizes the proficiency of the Reserve components to enhance total capabilities. Once tasked to a specific AEF, Commanders are required to train and deploy capable units to meet mission requirements with out exception.

An illustration of typical Air Force integration is the composition of AEF #5 under the 355th Wing out of Davis-Monthan Air Force base. The AEF consisted of squadrons of F-15Cs, F16Cs, F16CGs, F16 CJs, A-10s, B52s, and an Expeditionary Combat Support Squadron. The AEF consisted of both active duty and Air National Guard units. The F16C squadron was made up of three squadrons from the 174th, 122nd and 144th Air National Guard. Each unit supported 30 days to cover the 90 day on-call period. The active Air Force provided on call support for the entire 90 day period. Another example, AEF # 6 tasked the Air National Guard with two squadrons of F16Cs and One Squadron of B-1s. Similar to AEF #5, the Air National Guard teamed with other squadrons to support in 30 day intervals to cover the entire 90 day requirement.[37] Within the 30 day mission windows, traditional guardsmen who could not spend 30 days, rotated out every 15 days meeting the 15 day annual training requirements. Mission requirements and regional tasks are certified by the commander utilizing the existing tools and assessments available to the commander. There are no additional certification requirements added and no outside assistance delegated to ensure the unit is ready. This procedure falls in line with the concept of getting the commanders involved and hold them responsible for the readiness of their units.

A mission success story for the Air Force Reserve and Total Air Force is the numbers of personnel that supported AEFs #1 through #10. A total of 9,305 personnel voluntarily mobilized and supported the AEFs on-call requirements. An additional 3,523 personnel voluntarily mobilized and supported the Expeditionary Combat Support requirements. These numbers reflect the attitude that the Air Force has in capitalizing on the available resources in experienced manpower yet not jeopardizing the future by mandatory involuntary PRC mobilizations.[38]

In addition to the AEF cycle predictability, 90 day rotations are directly related to the units and crews ability to perform their world wide mission at all times. Crews that deploy to SSCs focus only on theater specific missions and are unable to train to world wide deployable standards. For example, units that deploy to Operation Northern or Southern Watch, conduct patrol operations but are unable to train on air interdiction type maneuvers. They become very proficient in tasks specific to that theater, but quickly loose proficiency in other world wide deployable tasks. Ninety day rotations enable the unit and personnel to meet the rotational schedule, redeploy, and then focus on the other real world deployable mission tasks prior to becoming non-mission ready. Any deployment length over the 90 day period will result in increased resources in time, training, and funds to reestablish worldwide deployable standards.[39]

SUMMARY OF TOTAL INTEGRATION

As indicated in table 4 below, Army National Guard aviation units are deploying into the CENTCOM and EUCOM theater in support of steady state SSC operations. These are in the same theater of operations that the Air Force is providing AEFs with Active and Reserve Component Forces to support Operation Northern and Southern Watch. The CINC in each region accepts the rotational concept of 90 days for Active Component Air Force and 15 to 30 day rotational voluntary mobilizations for Air Force Reserve and Air National Guard. Army National Guard aviation units working for the same CINCs are not allowed to deviate from the involuntary PRC deployments in meeting the SSC missions. In the author's perception, this disparity is a direct result of the lack of overarching force management policy combined with lack of true integration and capitalization of expertise that would come from reserve component voluntary mobilization.

SSC	UH-60 Airframes	Medevac Airframes	Attack Airframes
Bosnia (since 1995)	8	6	
Kuwait(since 1998)	4		8
Kosovo (since 1998)		4	

TABLE 4 - ARMY AVIATION STEADY STATE SSC REQUIREMENTS[40]

Table 5 depicts the differences in the Air Force and Army integration of reserve components and support to the Small Scale Contingencies. A few highlights from the table:

- No overall rotational concept for the Army in meeting SSC missions.
- No overall Army standard for notification for deployments.

- Certification for deployment is different between Active Army and Reserve.
- The Air Force provides reserve component Full Time Manning (FTM) funding and assignments at significant higher percentage than the Army.
- Air Force is standardized across the board (90 days). Reserve component deployment lengths are reduced to take into account dual employer issues.
- Involuntary PRCs are used for all deployments for Army Reserve and Army National Guard units conducting SSCs. The Air Force conducts the majority of SSC deployments for Reserve and Air Guard personnel in a voluntary status.[41]
- Army deployment lengths are not standardized. No allotment for shorter rotations for reserve component personnel or consideration of citizen soldier dual employer issues.

	US Air Force (AEF)	US Air Force RC (AEF)	Army AVN	ARMY AVN/ RC
Predictable	Yes	Yes	No	No
Notification lead	15 Months	15 Months	Corps/Div Stand.	No Stand.
Certification	Commander	Commander	Commander	TSB – CDR
Preparation time	12-14 Months	12-14 Months	No Standard	No Standard
PRC – SSC*	N/A	No/Minimum	N/A	Yes
Length of Deploy	90 Days	30 days*	180 Days	90 or 180 Days
Aviator Req		Same as Active	ATM	ATM - Same**
FTM – Tech.	N/A	21 % fill	N/A	7 % Fill***
FTM- AGRs	N/A	10 % fill	N/A	6 % Fill***

TABLE 5 - RESERVE COMPONENT INTEGRATION DIFFERENCES

*Air national Guard units are teamed with two other units to meet the 90 day requirement. Each unit is tasked for 30 days and allowed to rotate crews in every 15 days.

** Funding not received at all units to meet this requirement due to tiered resources.

*** Represents 40% of authorized fill for FTM

RECOMMENDATION

Institutionalize a rotational base concept utilizing all components of Army Aviation in support of forward deployed SSCs. Army Aviation force structure across all components provides the large rotational base force needed to implement and institutionalize this concept. This concept provides a more a predictable, better integrated use of reduced Army Aviation structure to answer increased OPTEMPO requirements. In addition, it provides greater flexibility to transition all aviation components to higher levels of readiness in support of increased levels of conflict intensity. The rotational base of integrated Army Aviation components allows for:

- Shorter rotational lengths of ninety days for all components to ensure maintenance of world wide deployment standards.
- Integration and utilization of reserve component expertise in voluntary mobilization.
- Predictable planning schedule for all components, families and employers.
- Army to meet the expectations as directed in the QDR.
- Commanders the ability to train and prepare units under a predictable schedule.

This concept is a significant change in the way the Army does business. It creates "a way" to enhance predictability, sustain training levels, and integrate reserve component Army Aviation with the Active Duty. Assigning Brigade Task Forces to standardized training, on-call/ deployment, and training/certification cycles will increase voluntary mobilizations of reserve component aviation personnel, allow personnel to gain predictability in operational tasking, and ensure world wide mission readiness through shorter SSC rotations. Implementation requirements include:

- Department of the Army level overarching plan and focus to support this force management concept.
- Assign Brigade Task Forces to specific rotation cycles through an overarching concept managed at the Department of Army level.
- Standardize training, certification and deployment requirements for all components.
- Provide required resources to all aviation units to ensure standards are able to be met for mission requirements.
- Give commanders the responsibility and hold them accountable for unit readiness.
- Develop a method for reserve components to provide an overall continuity cell for the standard 90 day deployment and allow for 15 to 30 day unit rotations.
- Fill reserve component full time manning to required versus authorized levels.
- Implement 90 day rotations to support SSCs, ensuring no degradation of overall mission readiness. (prepared for worldwide mission versus SSC mission only)

Table 6 depicts the number of aviation units per component in the Army that can be counted on to be the rotational base. This excludes special operations units, aircraft assigned to the 82nd Airborne Division as the strategic rapid response force, and aviation units forward deployed to Korea and Honduras. Given these numbers and reflecting back to the QDR, DOD directive "provide a rotational base – a larger base of forces from which to provide forward

deployed forces in support of long standing contingency commitments," a method exists similar to the AEF cycle to schedule units into rotational cycles.

Compo	Corps Avn Bde /Group	Division Bde Hq	Lift Battalion*	Attack Battalion**	Med Lift Co	Medivac Company
NG	1 / 5	8	25	8	7	15
Reserve	1	0	0	2	4	0
Active	2/2	9	14	12	7	12
Total	3/8	17	32	32	18	27

TABLE 6 - ARMY AVIATION [42]

* denotes UH-60 equipped battalions (GSAB, CSAB,CAB, ASSAULT)

** denotes AH-64 equipped attack or cavalry battalions/squadrons

Table 7 depicts "A Way " for aviation brigades/groups to be assigned to deployment cycles.

Rotation Schedule

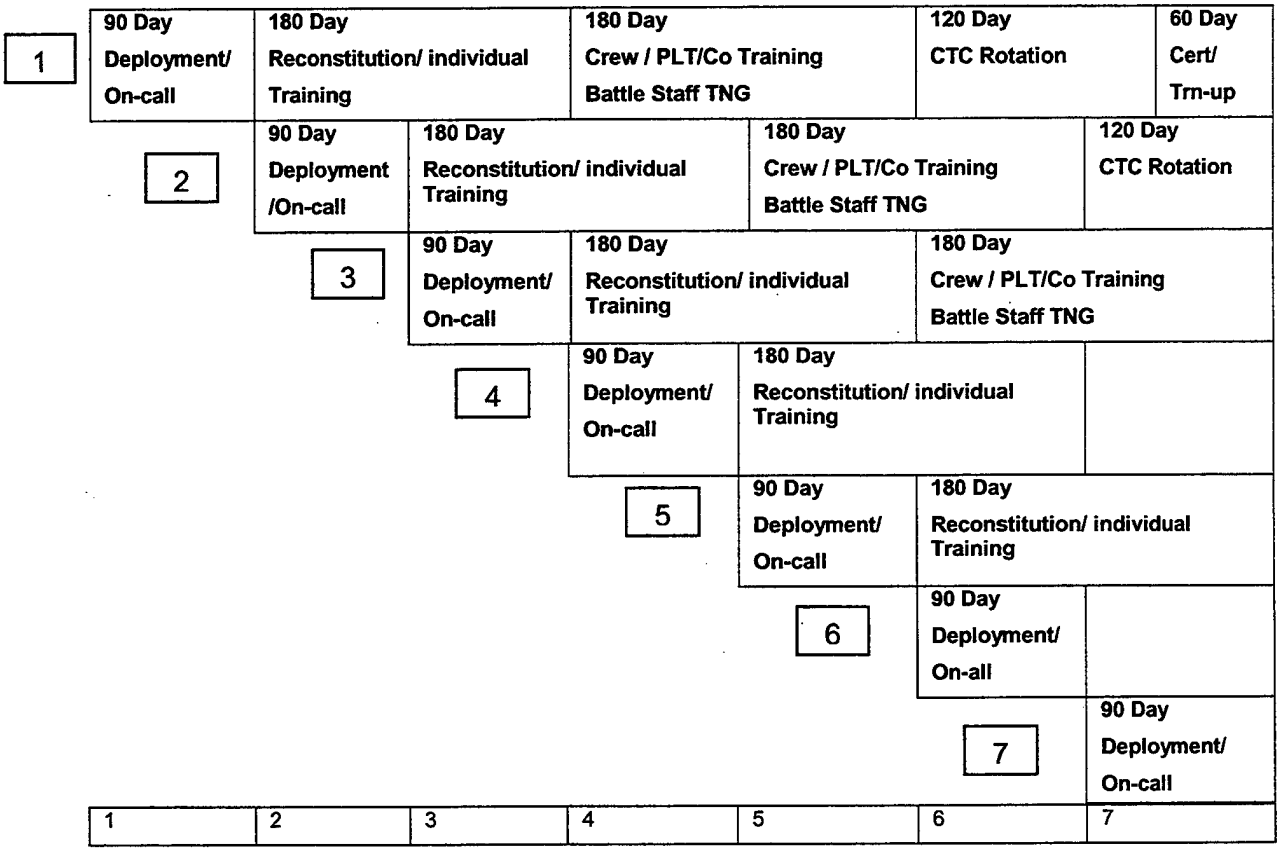

TABLE 7 - ROTATION RECOMMENDATION

Rotational cycles are 21 months with a deployment or on-call status no less than 18 months apart. With 28 aviation brigades/groups as the lead, at least 2 brigade headquarters could be assigned to each cycle. This provides for rotating 14 aviation brigade sized Task Forces (1 Active / 1 Reserve) during the 21 month cycle with additional headquarters on standby. The number of battalions allow for more units to be assigned per cycle or greater amounts of time between actual deployments. Integration between components allow for greater flexibility and predictability. A base of seven cycles per year (rotations) would ensure that units would be assigned to a cycle no sooner than every 8th cycle.

Illustration 1 depicts a capabilities based Aviation Brigade/Group Task Force concept. The units will come from the active or reserve component unit of assignment One each brigade/group headquarters from active and reserve components would be assigned to each cycle.[43] The company and battalion headquarters are responsible for unit readiness to the Brigade/Group Task force. The Brigade Task Force would be assigned to a cycle and assigned a specific SSC at least 18 months out. The Brigade would be at the highest readiness state upon certification and then on call during the 90 day window. The units from the Brigade Task Force scheduled for actual deployment to meet SSC requirements would deploy into theater. (See tables 4 and 7).

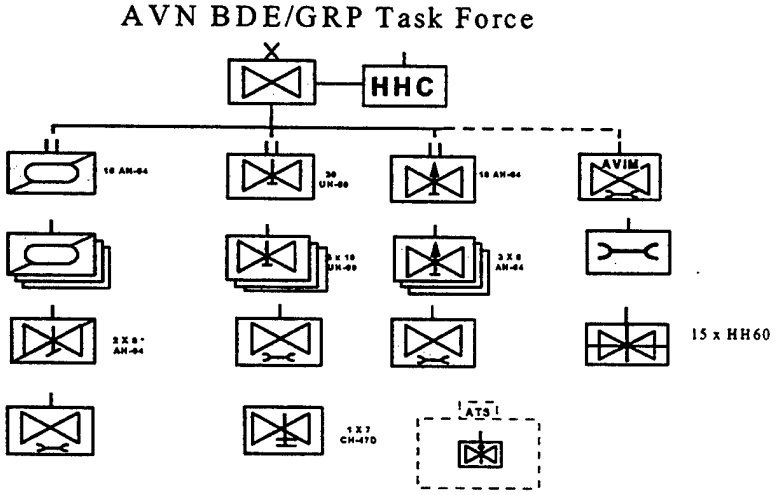

ILLUSTRATION – 1 BRIGADE/GROUP TASK FORCE

Scenario 1: Active duty unit assigned to Cycle 1. The Active UH-60 Battalion is assigned SSC for Bosnia. The battalion would deploy the appropriate aircraft and personnel for a 90 day rotation.

Scenario 2: National Guard / Reserve component assigned to Cycle 2. The reserve component UH-60 Battalion is assigned SSC for Bosnia. The battalion would deploy the battalion continuity cell for the 90 days and then rotate companies in on the deployed equipment every 30 days. Internal crews could rotate for 15 day normal Annual training periods. (This scenario is used to support Southern Commands Oversea Deployment Training missions in Central America / and replicates

the Air Force AEF concept) Provides for unity of command to those companies in the National Guard that are located in different states than the battalion or brigade headquarters.

CONCLUSION

> **"I looked at a National Guard Apache Battalion, probably one of the best – equipped battalions that I've seen in the Total Army. I told the commanders over there, including the TAG, that the Active Component guys would kill for those facilities. I mean, those are just outstanding facilities, outstanding equipment, great pilots, great training area. That is a case where the Guard battalion is better equipped than probably a lot of our active component units."** -General Riemer [44]

In this paper I provided a brief historical overview of mobilizations and OPTEMP, an overview of the Service's Visions, and a comparison of the changes being made in the Air Force and Army to answer the continued increase in the military OPTEMPO. I then presented a comparison between the Army and Air Force in total integration of reserve components. My recommendation is presented with the understanding that significant paradigms must shift for change to take place to include funding, full time manning, resourcing, and rotational overarching concepts. I believe the large number of Army Aviation units in all components lends itself to the ability to easily transition to and successfully take advantage of the rotational concept. This concept would improve predictability, decrease involuntary mobilizations in the reserve components, and sustain training readiness levels across all components.

Word Count: 7013

ENDNOTES

[1] International Institute for Strategic Studies, The Military Balance 2000-2001 (London: Oxford University Press, 2000), 25-28; and International Institute for Strategic Studies, The Military Balance 1999-1991 (London: Brassey's, 2000), 17-22.

[2] Donald H. Rumsfeld, Quadrennial Defense Review Report (Washington, D.C.: U. S. Department of Defense, September 2001), 20-21.

[3] Gary Hart, The Minuteman (New York, NY: The Free Press, 1998), 142.

[4] John B. Conaway and Jeff P. Nelligan, Call Out The Guard (Paducah, KY: Turner Publishing Company, 1998), 315.

[5] Hans W. Mijocevec hans.mijocevec@carlisle.army.mil, "RC Employment Data & Strength Statistics," electronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil, 11 March 2002.

[6] Henry H. Shelton, Joint Vision 2020 (Washington , D.C.: U. S. Joint Chiefs of Staff, 2000), 12.

[7] Rumsfeld, 17

[8] Ibid.

[9] Ibid., 21

[10] The material in this paragraph is based on remarks made by a speaker participating in an October 2001 Army War College Commandant's Lecture Series.

[11] Naval Expeditionary forces http://www-cgsc.army.mil/usn/c500na~2/tsld0012.htm, accessed 3 January 2002.

[12] J.L. Jones, Marine Corps Strategy 21 (Washington, D.C.: U. S. Marines, 2000), 3.

[13] Eric K. Shinseki, "U.S. Army White Paper, Concepts for the Objective Force," available from http://www.army.mil/features/whitepaper/default.htm; Internet; accessed 6 December 2001, 20.

[14] Department of the Army, United States Army Transformation Campaign Plan (Washington, D.C.: U.S. Department of the Army, April 2001), para. 4.

[15] Ibid., para. 5.

[16] Ibid.

[17] Erin Q. Winograd, "What About Army Aviation," Air Force Magazine, July 2001, 64.

[18] "Army Accelerates Aviation Transformation," 7 September 2001; available from http://www.dtic.mil/armylink/news/sep2001/r20010907avnmodpressrel7sep01.html. ; Internet; accessed 3 December 2001.

[19] International Institute for Strategic Studies, The Military Balance 2000-2001, 25-28; and International Institute for Strategic Studies, The Military Balance 1999-1991, 17-22.

[20] "Army Accelerates Aviation Transformation."

[21] Department of the Air Force, "Expeditionary Aerospace Force, Detail Concept Paper Aerospace Expeditionary Forces (AEFs)," 3 January 2000; available from http://www.af.mil/eaf/aef_concept_paper.pdf; Internet; accessed 15 December 2001.

[22] F. Whitten Peters and Michael Ryan, America's Air Force Vision 2020 (Washington, D.C.: U.S. Air Force, 2000), 2.

[23]F. Whitten Peters and Michael Ryan, "Air Expeditionary Forces," 4 August 1998; DOD Press Briefing; available from www.af.mil/lib/misc/eaftrans.pdf; Internet; accessed 10 December 2001.

[24] Ibid.

[25] John P. Jumper, Statement of General John P. Jumper, Statement Presented to the Senate House Armed Service Committee 105th Congress, 26 October 99; available from http://www.house.gov/hasc/testimony/106th congress/99-10-26jumper.htm; Internet; accessed 19 February 2002.

[26] Department of the Air Force, " Expeditionary Aerospace Force, Detail Concept Paper Aerospace Expeditionary Forces (AEFs)."

[27] Department of the Army, United States Army Transformation Campaign Plan, para 4.

[28] Thomas J. Plewes, Statement of Major General Thomas J. Plewes, Chief, Army Reserve, Army Reserve Overview, Statement Presented to House Armed Services Committee 106th Congress, available from www.house.gov/hasc/testimony/106thcongress/00-03-08plewes.htm; Internet; accessed 13 December 2001.

[29] Observation from personal experience after mobilizing two companies through 1st Army CONUSA deploying to Kuwait, and then mobilizing two different companies through 5th Army CONUSA deploying to Kuwait.

[30] "National Guard Brief to Army War College, An Overview," briefing slides with scripted commentary, Carlisle Barracks, U. S. Army War College, October 2001.

[31] This statement is from personal observation and experience as commander 1-189th Combat Support Aviation Battalion supporting Operation Desert Spring rotation 5 and 6, June 2000 – August 2001.

[32] The Commander must coordinate all training through the TSBs ensuring training is observed and meets standards. If a reserve component is split stationed across many states, TSB must observe all training, creating additional administrative coordination efforts. Units may go through a FORSCOM Aviation Resource Management Survey (ARMS), Directorate of Evaluation and Standards (DES) evaluation and complete a CTC rotation the year prior to deployment, but are still required to be validated through the active duty TSB. Noteworthy is the fact that the average Reserve component cockpit crew experience is 1500 hours compared to the 750 Hours on active duty. This certification by the TSB is only directed at the Reserve components. Active duty units deploying to SSCs are certified by the chain of command

[33] Personal observation and experience at the time of deployment as A Company Commander, 2-25 ATKHB, 10th Mountain Division, and then Aide-De-Camp, Deputy Commanding General, Third U.S. Army, deployed to Operation Desert Shield/Storm.

[34] Stephen M. Duncan, Citizen Warriors: America's National Guard & Reserve Forces and the Politics of National Security (Novato, CA: Presido Press, 1997), 137-158.

[35] "Equipment," Air Force Magazine 84 (May 2001): 55.

[36] Ricardo Aponte, "Air Force Command Overview," briefing slides with scripted commentary, Carlisle Barracks, U. S. Army War College, 20 July 2001.

[37] Mark Hicks, "Expeditionary Aerospace Force (EAF)," briefing slides with scripted commentary, Carlisle Barracks, U. S. Army War College, 17 July 2001.

[38] Aponte.

[39] The material in this paragraph is based on remarks made by a speaker participating in a March 2002 Army War College Commandant's Lecture Series.

[40] Robben Memmel Robben.Memmel@ngb.army.mil, "Research Data," electronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil, 25 January 2002.

[41] Hans W. Mijocevec, " RC Employment Data & Strength Statistics," 11 March 2002.

[42] Alvin L. Foshee Alvin.foshee@hqda.army.mil, "USAWC Research Project," electronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil, 12 March 2002.

[43] Units within the wartrace assignment may be Active Duty, Army Reserve or army National Guard. Currently in the Army Aviation Force structure, many active brigades consist of compo 2 or compo 3 units. Likewise, Army National Guard Brigades and Groups consist of compo 1, compo 2 and compo 3 units. The Brigade Task Force has the oversight responsibility to ensure readiness throughout the brigade. Company and Battalion commanders have the primary responsibility to ensure unit, crew, and individual training readiness.

[44] Conaway and Nelligan.

BIBLIOGRAPHY

Aponte, Ricardo. "Air Force Command Overview." Briefing slides with scripted commentary. Carlisle Barracks: U. S. Army War College, 20 July 2001.

"Army Accelerates Aviation Transformation." 7 September 2001. Available from http://www.dtic.mil/armylink/news/sep2001/r20010907avnmodpressrel7sep01.html. Internet. Accessed 3 December 2001.

Conaway, John B., and Jeff P. Nelligan. Call Out The Guard. Paducah, KY: Turner Publishing Company, 1998.

Duncan, Stephen M. Citizen Warriors: America's National Guard & Reserve Forces and the Politics of National Security. Novato, CA: Presido Press, 1997.

"Equipment." Air Force Magazine 84 (May 2001): 55-60.

Foshee, Alvin L. Alvin.foshee@hqda.army.mil. "USAWC Research Project." Electronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil. 12 March 2002.

Hart, Gary. The Minuteman. New York, NY: The Free Press, 1998.

Hicks, Mark. "Expeditionary Aerospace Force (EAF)." Briefing slides with scripted commentary. Carlisle Barracks: U. S. Army War College, 17 July 2001.

International Institute for Strategic Studies. The Military Balance 2000-2001. London: Oxford University Press, 2000.

_____. The Military Balance 1999-1991. London: Brassey's, 1990.

Jones, J.L. Marine Corps Strategy 21. Washington, D.C.: U. S. Marine Corps, 2000.

Jumper, John P. Statement of General John P. Jumper. Statement Presented to the Senate House Armed Service Committee 105th Congress, 26 Oct 99. Available from http://www.house.gov/hasc/testimony/106th congress/99-10-26jumper.htm. Internet. Accessed 19 February 2002.

Memmel, Robben M. Robben.Memmel@ngb.army.mil. "Research Data." Eelectronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil. 25 January 2002.

Mijocevec, Hans W. hans.mijocevec@carlisle.army.mil. " RC Employment Data & Strength Statistics." Electronic mail message to Kevin Kepler Kevin.kepler@carlisle.army.mil. 11 March 2002.

"National Guard Brief to Army War College, An Overview." briefing slides with scripted commentary. Carlisle Barracks: U. S. Army War College, October 2001.

"Navy Training / Deployment Cycle." Available from http://www-cgsc.army.mil/usn/c500na~2/tsld012.htm. Internet. Accessed 3 January 2002.

Peters, F. Whitten and Michael Ryan. America's Air Force Vision 2020. Washington, D.C.: U.S. Air Force, 2000.

_____. "Air Expeditionary Forces." 4 August 1998. DOD Press Briefing. Available from www.af.mil/lib/misc/eaftrans.pdf. Internet. Accessed 10 December 2001.

Plewes, Thomas J. Statement of Major General Thomas J. Plewes, Chief, Army Reserve, Army Reserve Overview. Statement presented to House Armed Services Committee 106th Congress. Available from www.house.gov/hasc/testimony/106thcongress/00-03-08plewes.htm. Internet. Accessed 13 December 2001.

Rumsfeld, Donald H. Quadrennial Defense Review Report. Washington, D.C.: U. S. Department of Defense, September 2001.

Shelton, Henry H. Joint Vision 2020. Washington , D.C.: U. S. Joint Chiefs of Staff, 2000.

Shinseki, Eric K. " U.S. Army White Paper, Concepts for the Objective Force." Available from http://www.army.mil/features/whitepaper/default.htm. Internet; Accessed 6 December 2001.

U. S. Department of the Air Force. " Expeditionary Aerospace Force, Detail Concept Paper Aerospace Expeditionary Forces (AEFs)." 3 January 2000. Available from http://www.af.mil/eaf/aef_concept_paper.pdf. Internet. Accessed 15 December 2001.

U. S. Department of the Army. United States Army Transformation Campaign Plan. Washington, D.C.: U.S. Department of the Army, April 2001.

Winograd, Erin Q. "What About Army Aviation." Air Force Magazine. July 2001, 64-68.